

4. A Powerful Jet Induced Starburst in 1243+036?

Using a different slit orientation, Van Ojik et al. (1996) report that the blue excess Ly α flux is displaced spatially from the nucleus and coincides with the radio jet bend seen in their radio maps 2" south-east of the nucleus. Such a radio bend confirms the existence of a shock while its spatial association with Ly α only adds to the plausibility of the Fermi acceleration model. But what is the ultimate source of the Ly α photons which are blueshifted across the shock front? It cannot be the shock itself as this would imply absurdly high densities to account for the observed Ly α luminosity ($\sim 10^{43.4}$ erg/s). It cannot be nuclear photoionisation since the existence of two neutral gas mirrors bracketing the accelerated Ly α photons is essential to the Fermi accel-

eration process; nuclear photoionisation would prevent the trailing H I mirror from existing. The most plausible explanation remaining is that of a colossal jet-induced starburst, similar in nature to that envisaged by Rees (1989). Moreover, the non-detection of C IV emission in 1243+036 argues against nuclear photoionisation or shock excitation and favours the starburst picture. Interestingly, the ubiquitous C IV line has also been reported missing in 3C326.1, another radio galaxy with asymmetric Ly α to which Neufeld and McKee (1988) applied their novel Fermi acceleration model. It may be that blue asymmetric Ly α profiles are a sign of extranuclear starbursts. Adopting a Salpeter initial mass function of slope 1.35 which extends from 0.1 to 125 M_{\odot} , we derive a luminosity for the hot stars of $1.3 \cdot 10^{54}$ ionising photons/s from the observed Ly α luminosity. Assuming

an instantaneous burst of star formation with this initial mass function gives a mass of newly formed stars of $\geq 5 \cdot 10^7 M_{\odot}$ (Bruzual and Charlot, 1996).

References

- Binette, L., Joguet, B., Wang, J.C.L., 1998, *ApJ* in press.
Bruzual A., G. and Charlot, S., 1996, in *A Data Base for Galaxy Evolution Modeling*, eds. C. Leitherer et al., *PASP*, **108**, 996.
Neufeld, D.A., McKee, C.F., 1988, *ApJ* **331**, L87.
Rees, M.J., 1989, *MNRAS* **239**, 1P.
van Ojik, R., Röttgering, H.J.A., Carilli, C.L., Miley, G.K., Bremer, M.N., Macchetto, F., 1996, *A&A* **313**, 25.
van Ojik, R., Röttgering, H.J.A., Miley, G.K., Hunstead, R. W., 1997, *A&A* **317**, 358.

L. Binette
binette@astroscu.unam.mx

Photos from Science Writers' Symposium

On the occasion of the VLT UT1 First-Light Event, a Science Writers' Symposium took place on Monday, April 27, and Tuesday, April 28, 1998, at the ESO Headquarters (Garching, Germany) with a complete briefing for media representatives about the VLT Project (technology, science) and its continuation after the UT1 First Light. The presentations were mostly made by ESO technical and scientific staff. About 40 media representatives participated, from all ESO member countries and beyond.

The ESO Director General, Prof. Riccardo Giacconi, introduces the VLT and its many scientific and organisational aspects. ►



The participants enjoy the teleconference with Paranal.



Massimo Tarenghi during the teleconference with Paranal. On the other side, at Paranal, Jason Spyromilio and Peter Gray.